

REMARKS

Status of Claims:

Claims 1, 7-16, 19-21, and 54-59 were pending in the application; Claims 1, 5, and 7 are hereby cancelled without prejudice or disclaimer of subject matter contained therein. The Applicants reserve the right to prosecute the subject matter thereof in one or more divisional, continuation, and continuation-in-part application(s). Claim 60 is newly-presented. Claims 8-16, 19-21, and 54-60 are now pending. Each pending claim defines an invention that is novel and unobvious over the cited art. Favorable re-consideration of this case is respectfully requested.

Disclosure Supporting the Instant Amendment:

Claim 60 is newly presented. The recitations of new Claim 60 are supported by the original disclosures of paragraphs 0047, 0050 – 0054, and Figure 2. In view of the original disclosure, the present amendment does not comprise “new matter.”

Claims Rejections Under § 35 U.S.C. 103

- I. Claims 1-4, 7-12, 19-21, 54, and 56-57 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Li (WO 02/031463) in view of DeNuzzio (WO 2004/001404), Chazalviel¹, Yoshida (JP 07-184883), and Kuhr (2003/0082444).
- II. Claims 14-16, 55 and 58 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Li in view of DeNuzzio, Kuhr, and Girault (5,512,489).
- III. Claim 59 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Li in view of DeNuzzio, Kuhr, Girault, and further in view of Torch (6,163,281) and Wohlstadter (6,090,545).

¹ Chazalviel et al., Applied Spectroscopy, 1993, Vol. 47, pp. 1411-1416.

The Examiner alleges that Li teaches a microfluidic trench:

The apparatus of Li further includes microfluidic trench for containing one or more target molecules (reference element 7 in Fig.'s 1 and 3 and p39, 1st paragraph). (Final Action September 24, 2010, page 2, paragraph 6).

Recitations relating to a microfluidic trench were present in rejected Claims 1 and 14. The applicants, cancel Claim 1 favor of new Claim 60 which is presented to clarify the wording of the present invention. The present amendment does not narrow the scope of the claim.

The Examiner cites Li as teaching a microfluidic trench and specifically cites "reference element 7 in Fig.'s 1 and 3 and p39, 1st paragraph." However, the interpretation offered by the Examiner directly contradicts the teaching of the inventor. Reference element 7 is not a trench; as disclosed by Li, element 7 is a "well":

Well structures 7 are fabricated from this device by conventional photolithography or laser drilling methods. (Li, page 39, 1st paragraph, lines 2-3).

The well structure is preferably produced wherein the bottom of the well structure comprises the top of electrode 5 surface, while the top of the well structure is surrounded by the second electrode 1. (Li, page 39, 2nd paragraph, lines 5-7).

Li notes that the grid of wells are "similar to a microtiter plate." (Page 8, last paragraph, lines 2-3). Li does not teach a microfluidic trench; rather, Li teaches a well structure. None of the remaining art teaches, nor is cited by the Examiner as teaching, a microfluidic trench.

Claims 1 and 14 recited a total internal reflectance prism. New Claims 60 and 61 now recite that said prism is optically-coupled to each said microfluidic trench. The Examiner cites DeNuzzio as teaching "microfabricated sensors with multiple working electrodes coupled to both optical and electrochemical detection means." DeNuzzio teaches "optical detection in a single

planar microcell” where the microcell is “integrated in the path of electromagnetic radiation.”
(DeNuzzio, page 5, paragraph 0014, lines 1-3).

The Examiner cites Chazalviel as teaching FT-IR detection. Although DeNuzzio and Chazalviel provide teaching related to optical and FT-IR detection. Neither reference teaches a total internal reflectance prism optically-coupled to a microfluidic trench. Moreover, none of the other cited references relates to a total internal reflectance prism optically-coupled to a microfluidic trench.

The cited art, taken severally or together, fails to teach at least two recitations of the present invention. In view thereof, the applicants respectfully request the Examiner withdraw the rejections under 35 U.S.C. § 103(a) as moot.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance. The Director is authorized to charge any fees necessary and/or credit any overpayments to Deposit Account No. 03-3975, referencing Docket No. 043395-0377973.

Respectfully submitted,

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By: /John A. Evans/

John A. Evans, Ph.D.
Registration No.: 44,100
Attorney for Applicant(s)

Customer No. 00909
PILLSBURY WINTHROP SHAW PITTMAN LLP
P.O. Box 10500
McLean, VA 22102
Telephone: 703-770-7900
Facsimile: 703-770-7901